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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,649	03/28/2007	Theodore George Paraskevatos	48105-0003-00 (227870)	9258

55694 7590 06/04/2009  
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EXAMINER

NGUYEN, PHUNG HOANG JOSEPH

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

06/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,649

**Applicant(s)**

PARASKEVAKOS ET AL.

**Examiner**

PHUNG-HOANG J. NGUYEN

**Art Unit**

2614

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/14/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-64 and 66-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-64 and 66-81 is/are rejected.
- 7) ☐ Claim(s) 2-64 and 66-81 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's amendment filed 5/4/09 has been carefully considered and has been entered.

Claims amended: claims 2-5, 11-20, 34-44, 48, 66-77 and 79-81.

Claims cancelled: claims 82 and 83.

Claims newly added: None.

Claim pending: claims 2-64 and 66-81 with claims 11, 48, 80 being independent.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 7, 9, 25, 29, 39, 41, 43, 60 and 74 are rejected under 135 USC 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 4, 7, 9, 25, 29, 39, 41, 43, 60 and 74, the phrase "for example" or "such as" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).  
Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**4. Claims 2-64, 66-75 and 79-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verma et al (US Pat 4,833,618) in view of Crichlow et al (US Pub 2002/0018545).**

Claims 11, 44-46, 48 and 80, Verma teaches a method of remote management of products and services (*Title and Abstract*), comprising:

installing at least one sensor (*meter sensor interface means, col. 1, line 67 or meter sensors 12 A, B and C*) in or near at least one consumption metering device (*Remote Data Unit (RDU) located at an end-user site for monitoring, accumulating, and reporting usage data from locally disposed meters, col. 1, lines 56-59*);

collecting readings from the at least one sensor installed on the at least one metering device (*collecting the usage data sent from the RDU over a conventional telephone network and assembling and transmitting the data to a utility host for administrative processing and billing, col. 1, lines 60-63*) at fixed time intervals (*at a specific predetermined time during one day of the billing cycle or period, col. 2, lines 27-28*).

transmitting the collected readings to a communication unit installed in or near property of a consumer (*...and transmitting the data to a utility host for administrative processing and billing, col. 1, lines 60-63*);

receiving, processing, and storing (*collecting, assembling and transmitting the data, col. 1 lines 60-63*) the readings from the at least one sensor in the communication

unit (*The control unit output is connected to a digital communications interface which collects the data, col. 2, lines 1-12*);

transmitting information processed by the communication unit to at least one communication center (*Central office 28 of fig. 1; col. 3, lines 29-35*);

receiving, processing, and storing the information (*collecting, assembling and transmitting the data, col. 1 lines 60-63*) from multiple communication units of multiple users-consumers in the at least one communication center (*Central office 28 of fig. 1; col. 3, lines 29-35... connecting to the Utility collection 8*);

Verma teaches one or more communication units and communication center (*fig. 1 shows telephone 18 connecting to the central office 8 and utility collection 8 for communicating the billing and data collection between the customer's site and the service provider. Col. 3, lines 13-40 shows how the configuration and data collection components which involve the conventional telephones, and data processor exchanges involving communication units and communication centers*);

Furthermore, Verma teaches the information collected from the at least one sensor (*collecting the usage data sent from the RDU over a conventional telephone network and assembling and transmitting the data to a utility host for administrative processing and billing, col. 1, lines 60-63*). Verma also teaches software required in order to undertake and process information received from the communication unit (*hardware and software to facilitate the operation, administration and maintenance of the system, col. 9, line 45*).

Verma does not specifically discuss creating consumption curves or kilowatt hour sale prices; and transmitting the consumption curves or kilowatt hour sales prices to individual communication units. While Verma teaches the information (usage data, see above)... Verma does not teach the information is processed on the basis of time, leading to the creation of more than one charging zones.

Crichlow teaches a method and system capable of automatically optimizing electric power use at the customer location by using a combination of linear and non-linear optimizing algorithms and "time of day" or "real time pricing per Kwhr" data, thereby allowing the customer to minimize total energy costs [0123] where in the real time pricing information from the utility company on the \$/Kwhr for electricity sold, [0116]; the Kw rate forecasted at each hour of the day to optimize the use of the system [0117]; the predicted Kwhr to meet all system constraints and power use of the customer, [0118]; and the cumulative Kwhr dispatched to the customer to meet the electric power needs of the system customers [0119]. Crichlow shows the graphical "curve" of the power real-time pricing, real time power use and the real time power cost (figs. 14-16 and [0115]) for the specifically detailing the consumer cost in a very clear and definite manner to monitor usage of a utility at a remote location by a central station and incorporates a real time method for optimizing energy costs operationally by combining optimization algorithms and real time pricing data to lower costs to the energy user (*Abstract*). As a point of emphasis on the teaching of charging zones which appears to be very consistent and relevant to today's teaching on energy saving, earth/environment friendly and green earth, Crichlow indicates the purpose of the use

of "time of day" or "real time pricing per Kwhr" data will allow the customer to minimize total energy costs by using power at times that minimize costs but still meet all the required constraints for customer electric power use. This allows the energy end user to select the equipment such that the hourly use of power keeps the total energy cost at a minimum without affecting commercial and industrial operations [0040].

Therefore it would have been obvious to the ordinary skilled artisans at the time of the invention was made to incorporate the teaching of Crichlow into the teaching of Verma for the purpose of enhancing the system with variety of ways to verify the energy use of the customers by providing them the exact amount of energy use associated with the relevant cost/price. Furthermore, the incorporation would also increase the modern convenience of internet service where customers can browse and pay their bills via online banking or other internet related payment technologies (*Crichlow's Abstract*).

Furthermore, Verma does not specifically discuss means for recognition of emergency conditions, means of classification thereof, and means for sending that recognition and classification data to the at least one communication center.

Crichlow teaches provide a system for automatically determining the working status of the customer's electric, natural gas or water system over the internet during times of outages and other disaster related incidents. When the meter is offline or power is out there is a special outage signal code from the PC device sent over the computer modem to the main server, [0036, 0093, 0122, and 0123].

Claims 2-10 and 69-73, both Verma and Crichlow teach water meter and gas meter and electric meter and relevant meter sensor or monitor throughout their document.

Claim 12, Verma teaches the information collected by the at least one sensor meter is transmitted from the meter to the communication unit through power transfer lines (*Verma: fig. 6*).

Claims 13-16 and 66-68, Verma does not but Crichlow teaches the use of internet (*Internet Service Provider 50 of fig. 2*), mobile telephony (*wireless, par. 0123*), simple telephone line (*par, 0123*).

**Claims 17-36, 47, 50-64 are rejected under 35 U.S.C. 103(a) as being obvious over Verma and Crichlow.**

Claims 17-36 and 50-64, Verma and Crichlow do not explicitly discuss customer receives information concerning the progress and development; customer settles the invoice; polling, price update, customer expresses his opinion; service provider may interrupt the service and product; service provider may reconnect; service provider may interrupt due to leaking of gas, or uncontrolled consumption or exploitation for financial gains, for any reason concerning safety.

It is however obvious to the ordinary skilled artisan that the utility system (PC as a means with required software to send billing in the e-mail format) is designed not just to provide the comfort and convenience for the consumers, but also to profit from the services. The system is intelligently software-executable system. It is not just capable of interrupting the consumers who unfairly abuse the service by not paying their due, it



is also capable of providing safety by auto-shutting when there is leaking of gas or heat or electric or water that may be harmful to health and environment. Furthermore, it is also obvious that the provider would take advantage of the system to provide information related to the use of gas, water, heat and electric for the communication and education.

Therefore, it is obvious for the ordinary skilled artisans at the time of the invention was made to code a control function in response to emergency or abuses or tapering. It also provides educational awareness/advertisement of the energy consumption as part of customer-provider relationship building.

Claims 37-43 and 74-75 Crichlow: the following communications means and networks provide the electronic power transfer lines of the customer-user [0036, 0070]; radio electromagnetic, microwave ([0068] wireless communications network, [0069] public communications network, [0076] personal computer).

Claim 49, Verma teaches registration (col. 8, line 60).

Claim 79, see claim 80 for the teaching on the electric power supply.

Claim 81, see Crichlow (the PC and an e-mail message, see Abstract, and [0019, 0033, 0037]).

**Claims 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verma in view of Crichlow further in view of Lubliner et al (US Pat 5559894)**

Claims 76-78, Verma teaches digital communication interface and digital data signal. Likewise, Crichlow also teaches digital data.

Both Verma and Crichlow do not specifically teach digitized optical images or an optical character recognition (OCR) software program for receiving digitized optical images and processing them.

Lubliner teaches an OCR means (the computer with programmed OCR software) to read such information which includes meter identification number, manufacturer, manufacturer model or type, voltage, amperage, number of wires, meter reading, etc. (col. 6, lines 30-34) as one of the many methods of billing reading purpose.

Therefore it would have been obvious to the ordinary artisan at the time of the invention was made to incorporate the teaching of Lubliner into the teaching of Verma and Crichlow to clearly define that OCR is one of the best tools available to read/process the images recorded for the billing or any related literature for the customer use.

#### ***INQUIRY***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUNG-HOANG J. NGUYEN whose telephone number is (571)270-1949. The examiner can normally be reached on Monday to Thursday, 8:30AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 571 272 7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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